What is Claimed is:

1   1.   A wireless communication system protocol comprising:

2   a wireless MAC layer providing for MAC layer acknowledgments; and

3   a TCP layer providing for TCP layer acknowledgments, wherein at

4   least some TCP layer acknowledgments are buffered by the wireless MAC layer

5   and appended to a MAC layer acknowledgment of another MAC layer message.

1   2. The wireless communication system protocol of Claim 1 wherein

2   the wireless MAC layer is a modified CSMA/CA layer.

1   3. The wireless communication system protocol of Claim 1 wherein

2   the appending of a TCP layer acknowledgment to a MAC layer acknowledgment is

3   done under conditions of asymmetrical traffic.

1   4. The wireless communication system protocol of Claim 1 wherein

2   the combined MAC layer acknowledgment and TCP layer acknowledgment does

3   not need to contend for the wireless medium.

1   5. The wireless communication system protocol of Claim 1 wherein

2   the TCP layer acknowledgments are done in response to messages from another

3   node.

1   6. The wireless communication system protocol of Claim 5 wherein

2   the other node appends an acknowledgment of the transmitted TCP layer

3   acknowledgment along with another message transmitted by the other node.

1   7. The wireless communication system protocol of Claim 1 wherein a

2   MAC acknowledgment is sent to provide MAC layer acknowledgment of receipt

3   of TCP acknowledgment appended message.

1   8. The wireless communication system protocol of Claim 1 wherein

2   the TCP acknowledgment is sent only when link quality is very good.

1   9. A method operating a MAC layer comprising:

2   obtaining a TCP acknowledgment from a TCP layer, the TCP layer

3   producing the TCP acknowledgment when a predetermined number of TCP

4   messages are received;

5   buffering the TCP acknowledgment; and

6   appending the TCP acknowledgment to a MAC acknowledgment of

7   another message.

1   10. The method of Claim 9 wherein the MAC layer comprises a

2   modified CSMA/CA protocol.

1   11. The method of Claim 9 wherein the other node appends another

2   acknowledgment to a message in response to the TCP acknowledgment.